

Mineral Industry Surveys

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MOLYBDENUM IN APRIL 2011

Domestic production of molybdenum (Mo) in concentrate in April 2011 was 8% more than the output of the previous month and 43% more than that of April 2010, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,150 metric tons (t) at the beginning of 2011 and about 7,740 t at the end of April.

According to Ryan's Notes, the April monthly average price range for U.S. ferromolybdenum (FeMo) was \$18.889 to \$19.189 per pound (lb) of molybdenum content, compared with \$19.444 to \$19.861 per lb in March. European FeMo monthly averages ranged from \$41.061 to \$41.389 per kilogram (kg) of molybdenum content in April compared with \$41.656 to \$42.122 per kg in March. In April, worldwide molybdenum oxide (MoO₃) prices ranged from \$16.967 to \$17.178 per lb compared with \$17.083 to \$17.311 per lb in March.

Molybdenum production at the Antamina copper and molybdenum mine in Peru rose 76% in the quarter ended March 31, 2011, to 988 t compared with 562 t during the same period in 2010, according to BHP Billiton (Melbourne, Victoria, Australia). BHP Billiton owns a 33.8% share of the Antamina Mine located in the Andes Mountains of Peru (Ryan's Notes, 2011).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and consumer stocks of molybdenum material in March and April 2011. Export data for February and March 2011 and import data for March 2011 are also included.

Reference Cited

Ryan's Notes, 2011, Ferroalloy notes: Ryan's Notes, v. 17, no. 17, April 25, p. 2.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2010 ^p		2011		
	January– December	January– April	March	April	January– April
Production	59,600	18,700	5,820	6,280	22,900
Shipments: ²					
Domestic	14,000	4,380 ^r	1,420	1,530	5,070
Export	W	W	W	W	W

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data.

¹Data are rounded to no more than three significant digits.

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM
PRODUCTS¹

(Metric tons, contained molybdenum)

	2010 ^{r,p}		2011		
	January– December	January– April	March	April	January– April
Gross production	68,600	21,600	6,930 ^r	6,190	26,400
Internal consumption ²	W	W	W	W	W
Gross shipments	51,100	16,500	5,470 ^r	4,130	19,000

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data.

¹Data are rounded to no more than three significant digits.

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2011, March:						
Steel:						
Carbon	33,300	W	--	--	W	33,300
High-strength low-alloy	63,800	7,320	--	--	--	71,200
Stainless and heat-resisting	193,000 ^r	62,400 ^r	--	W	6,510	262,000
Full alloy	251,000	342,000	--	--	W	592,000
Tool	W	W	--	--	--	W
Total	541,000 ^r	411,000 ^r	--	W	6,510	959,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	75,700 ^r	W	--	W	89,000 ^r	165,000 ^r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	97	W	--	--	--	97
Mill products made from metal powder ³	--	--	--	--	W	W
Cemented carbides and related products ⁴	--	--	--	--	6	6
Chemical and ceramic uses:						
Pigments	--	--	(5)	--	--	--
Catalysts	77,300	--	(5)	--	W	77,300
Other chemicals	--	--	--	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	47,200 ^r	59,700	--	257,000 ^r	308,000	673,000
Grand total	741,000 ^r	471,000 ^r	--	257,000 ^r	415,000 ^r	1,880,000 ^r
Stocks, March 31, 2011	451,000 ^r	311,000 ^r	2,070	(6)	(6)	1,630,000 ^r
2011, April:						
Steel:						
Carbon	34,900	W	--	--	W	34,900
High-strength low-alloy	55,700	7,320	--	--	--	63,000
Stainless and heat-resisting	178,000	59,900	--	(6)	6,510	244,000
Full alloy	255,000	314,000	--	--	W	569,000
Tool	W	W	--	--	--	W
Total	524,000	381,000	--	--	6,510	911,000
Cast irons (gray, malleable, and ductile iron)	W	W	--	--	W	W
Superalloys	(6)	W	--	(6)	34,900	34,900
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	W	W
Other alloys	152	W	--	--	--	152
Mill products made from metal powder ³	--	--	--	--	W	W
Cemented carbides and related products ⁴	--	--	--	--	6	6
Chemical and ceramic uses:						
Pigments	--	--	(5)	--	--	--
Catalysts	77,300	--	(5)	--	W	77,300
Other chemicals	--	--	--	--	W	W
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,800	10,800
Other	(6)	54,000	--	--	284,000	337,000
Grand total	601,000	435,000	--	--	336,000	2,490,000
Stocks, April 30, 2011	448,000	305,000	2,070	(7)	(7)	1,630,000

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" category. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes calcium molybdate.

³Includes ingot, wire, rod, and sheet.

⁴Includes construction, mining, oil and gas, metalworking machinery.

⁵Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified uses: Other" of the "Other" category.

⁶Withheld to avoid disclosing company proprietary data; included in "Grand total" of the "Total" category.

⁷Withheld to avoid disclosing company proprietary data; included in "Total."

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2010			2011		
	January– December	March	January– March	February	March	January– March
Argentina	17,200	--	--	--	--	--
Australia	--	--	--	--	--	800
Austria	440,000	--	10,100	107,000	16,100	161,000
Belgium	9,610,000	767,000	1,910,000	858,000	744,000	2,760,000
Brazil	310,000	636	21,700	32,800	35,500	88,300
Canada	1,150,000	54,200	187,000	122,000	140,000	409,000
China	5,280,000	559,000	1,650,000	338,000	143,000	833,000
El Salvador	--	--	--	881	--	881
Finland	--	--	--	23,700	12,000	83,700
France	16,600	185	4,410	11,900	23,900	48,200
Germany	143,000	19,900	19,900	11,800	6,130	30,200
Hong Kong	1,140	--	--	--	--	--
India	924,000	67,700	98,000	175,000	100,000	380,000
Italy	13,200	--	--	11,700	11,900	23,600
Japan	2,630,000	139,000	377,000	282,000	219,000	833,000
Korea, Republic of	805,000	78,200	184,000	162,000	142,000	492,000
Luxembourg	11,500	--	--	12,500	12,300	24,800
Mexico	5,040,000	517,000	1,310,000	551,000	558,000	1,800,000
Netherlands	8,210,000	755,000	1,990,000	511,000	986,000	2,090,000
New Caledonia	1,050	--	--	--	--	--
Panama	2,360	--	--	--	--	--
Poland	194	--	--	--	--	--
Slovenia	24,600	12,400	12,400	--	--	--
South Africa	520,000	100,000	100,000	--	--	--
Spain	24,600	--	--	--	--	--
Sweden	12,100	--	--	19,000	23,300	54,300
Taiwan	67,900	--	--	--	--	17,600
Thailand	19,200	9,620	9,620	--	--	--
United Arab Emirates	154,000	--	--	--	--	12,600
United Kingdom	5,000,000	294,000	1,060,000	672,000	734,000	1,980,000
Venezuela	940	--	940	--	--	--
Vietnam	149,000	9,170	9,600	--	5,030	20,000
Total	40,600,000	3,380,000	8,960,000	3,900,000	3,910,000	12,200,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2010			2011		
	January– December	March	January– March	February	March	January– March
Argentina	13,300	--	--	--	--	--
Australia	628	175	175	--	--	--
Canada	677,000	82,700	186,000	40,300	89,700	200,000
Colombia	1,170	--	620	--	--	--
Denmark	372	--	--	--	--	--
India	36,600	10,900	10,900	--	--	--
Japan	12,700	--	--	--	--	--
Korea, Republic of	11,200	--	--	--	--	--
Mexico	12,900	--	2,800	476	--	6,660
Netherlands	196,000	--	--	49,900	38,400	126,000
Philippines	939	939	939	--	--	--
Singapore	14,300	--	--	--	--	--
Turkey	103	--	--	12,700	11,400	35,900
Total	978,000	94,800	202,000	103,000	139,000	369,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January–December 2010			March 2011			January–March 2011		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	10,300,000	6,340,000	\$112,000	1,140,000	697,000	\$16,000	2,820,000	1,730,000	\$35,100
Ore and concentrates other	13,500,000	6,610,000	202,000	1,620,000	530,000	29,500	4,070,000	1,530,000	65,000
Molybdenum chemicals:									
Oxides and hydroxides	508,000	NA	12,200	24,800	NA	684	24,800	--	684
Molybdates of ammonium	1,590,000	905,000	28,600	220,000	144,000	5,430	281,000	179,000	6,780
Molybdates (all others)	62,600	23,300	1,510	2,180	1,030	129	13,200	5,460	580
Molybdenum orange	349,000	NA	2,730	14,400	NA	139	84,000	NA	751
Ferromolybdenum	5,330,000	3,560,000	130,000	491,000	327,000	13,100	1,370,000	915,000	34,900
Molybdenum powders	232,000	221,000	10,100	40,700	40,600	2,030	106,000	105,000	4,990
Molybdenum unwrought	307,000	301,000	10,200	28,800	27,500	1,190	93,000	87,600	3,410
Molybdenum waste and scrap	703,000	682,000	26,900	67,700	55,900	2,270	186,000	165,000	6,730
Molybdenum wire	19,300	NA	3,030	2,000	NA	348	4,980	NA	812
Molybdenum other	582,000	NA	37,500	76,000	NA	6,320	167,000	NA	13,900
Total	33,500,000	XX	576,000	3,720,000	XX	77,100	9,210,000	XX	174,000

NA Not available. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.